

Pecora file

UNIVERSITY OF CALIFORNIA, BERKELEY

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

1C7-146

(415) 642-1361
TWX: UC SPACE BERK
(910) 366-7945

SPACE SCIENCES LABORATORY
BERKELEY, CALIFORNIA 94720

July 14, 1983

Mr. Allen H. Watkins
Chief, EROS Data Center
Geological Survey, USDI
Sioux Falls, South Dakota

Dear Mr. Watkins:

I wish to thank you for the invitation to present our Landsat-4 results at the Pecora Memorial Symposium.

I have enclosed a brief abstract of our work to date and I will expect the detailed information on the paper guidelines and schedules. Our research is being supported by the NASA-Goddard Space Flight Center and is focused on the photointerpretation of TM data for forestry, agricultural and soil surveys. With that emphasis our presentation appears to be best suited for the Wednesday morning session.

I look forward to presenting our results at the Symposium in October.

Sincerely,

Stephen D. DeGloria
Director
Remote Sensing Research Program

SDD:mbr

encl.

| | |
|-------------|-------------------------------------|
| Action | BYRNES |
| Info Copies | |
| Watkins | <input checked="" type="checkbox"/> |
| Landis | <input checked="" type="checkbox"/> |
| Metz | |
| Byrnes | |
| Admin. | |
| DPB | |
| CSB | |
| SDB | |
| AB | |
| Alaska | |
| Technicolor | |

(Antidated
7-20-83)

EVALUATION OF LANDSAT-4 IMAGE QUALITY FOR THE
INTERPRETATION OF FOREST, AGRICULTURAL AND SOIL RESOURCES

Stephen D. DeGloria
Remote Sensing Research Program
University of California
Berkeley 94720

ABSTRACT

The performance of both the Landsat-4 MSS and TM sensors is measured through the systematic evaluation of commercially available analytical film products. Natural targets are used to evaluate spectral variability, spatial resolution, radiometric sensitivity, and geometric fidelity of these images. MSS and TM film products include 18.5cm film positive and 18.5cm and 74.2cm prints of individual bands and various color composites. Spectral characteristics are evaluated through the interpretation of image tone and texture variability of known features. Spatial characteristics are evaluated through lineal and areal estimates of similar features, and through the evaluation of residual errors derived from control point processing of relative image coordinates and corresponding ground coordinates. Early results indicate that presently available film products provide adequate spectral and spatial representations of the digital data for mapping and stratifying landscapes in support of resource inventories, improved delineation of boundaries, detecting and identifying changes in land cover, and updating land use maps at 1:24,000 scale and smaller.